Office of Information Services

How to Develop a Business Needs Document Procedure

Version 1.0

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1. Purpose

The purpose of this procedure is to define and document the customer's specific business needs if they were not sufficiently documented in the concept and exploration phase. It is important to collect, analyze and define the business needs of the user organization(s) as they relate to the project. These business needs are gathered from a variety of sources, and are the basis for deriving user and system requirements. This document describes the steps required to develop a business needs document. The Business Needs Document is optional for low and medium focus projects and is recommended for high focus projects. This procedure is Activity 2 of the *Requirements Gathering Process*.

2. Overview

Using AMI's *Business Needs Document* template, clearly state the purpose, business goals, and objectives of the user's organization(s), which will be met or influenced by the system. Define the existing system, manual and/or automated. Define and document the business needs of the new system including rank and prioritization and prepare a business model.

3. Entry Criteria

If the Requirements Gathering Plan was required, it has been been signed.

4. Procedure Steps

AMI's template, *Business Needs Document,* shall be used to complete the Business Needs. The following steps correspond to the template and describe actions required. The Business Needs Document should:

- Identify the specific business needs as they relate to this business model and the system under development.
- Build a detailed business model, which describes how the user organization(s) does business and shows the interactions between the components of the user's organization(s).

4.1 Business Goals and Objectives

Defining business needs involves studying the problems and needs of an organization to determine how people, methods and computer technology can best accomplish improvements for the selected business area. When computer technology is used, the analyst is responsible for the efficient capture of data from the business source, the flow of that data to the computer, the processing and storage of that data by the computer and the flow of useful and timely information back to business users. Defining business needs helps the analyst bridge the gap between business users who generally do not understand the capabilities and limitations of computer technology and professional computer programmers and technicians who frequently do not understand the business applications they are trying to automate.

Applying computer technology to solve a business need usually involves development of an information system. An information system can be defined as “an arrangement of inter-dependent human and machine components that interact to support the operational, managerial, and decision-making information needs of an organization." Business needs that will be the basis for building an information system should include clearly defined purpose, goals, objectives, and policies for the business as well as the information system to be developed. This usually involves a review of the complete business. For example, executive management generally establishes the business purpose, while all management levels participate in establishing policy. Similarly, all management levels establish goals and objectives for their subordinate levels. Finally, and ultimately, clerical and service staff executes day-to-day business activities that fulfill the business purpose, policies, goals and objectives.

A defined business need contains information that describes a unit of data or function that is needed for an end user to accomplish a specific task. The emphasis is on WHAT is required of the system not how the system is to do it. The term “end user” generally describes those people who perform the tasks and whose jobs involve the creation, processing, and distribution of information. AMI analysts should understand that end users may exist at varying levels of responsibility and authority: clerical and service staff, supervisory staff, middle management and professional staff, and executive management. The overriding philosophy for developing a system is that the system must meet the needs of the end user and the objectives, goals, and policies of the business. Thus defining the business needs for a system may be addressed by collectively defining and balancing the needs of all the end users. This would appear to be a simple task but in practice is very difficult to accomplish because many end users will not be able to define their needs. Therefore the analyst must examine the business functions in sufficient detail to prepare a model that anticipates and encompasses all feasible business needs.

The requirements gathering process must determine which business needs should be included in the system. All business needs identified during the definition phase should be documented including those that are assumed to be outside the scope of the project. Once the business needs are documented in tabular format, they can be easily reviewed with the customer to identify the business needs to be included in the project. Business needs, if available, becomes the baseline for system requirements and will eventually be used to develop the application system. However project teams are encouraged to update business documents to maintain the scope of the project and for use as a reference when designing future changes. Business needs are not requirements.

4.2 DESCRIPTION OF THE EXISTING SYSTEM (IF APPLICABLE)

Study the existing system, manual or automated, to determine how the existing system operates. Identify the problems with the existing system and opportunities for improving the service provided by the system. Clearly identify the data the business uses which is relevant to the system, including its source, destination, and purpose. Some of the data may exist only in hard-copy formats, some may be generated reports, and some may be generated from fully automated systems. It is also important to identify any interrelationships between individual datum.

Describe the business process of the user's organization(s), identifying the major functional business areas, reporting structures, and any interrelationships. More detail should be applied in the areas affected by the system. Charts and flow diagrams with explanatory text are usually useful and understandable by most parties involved.

4.3 BUSINESS NEEDS OF THE NEW SYSTEM

Clearly identify the business goals and objectives to be addressed by the information system. Describe the business concepts of the customer that is needed to come to a common understanding on the terms and concepts for this project. This section should be a simple overview, as more detail on the business process will be provided in following sections. Often a bulleted list of terms, specific to the user's business, is useful to gain a common understanding.

4.3.1 Identify The End Users

The customer primary contact may act as a source for requirements, but it is preferred to elicit requirements from those that will be using the system and the designated subject matter experts. Each unique user of the system should be described here. Identify and group the end users of the new system by type or function performed then define what performance level is expected for each group. Identify the vocation, geographical locations, working environment, and number of end users. You may have several types of users, depending on your product. For example, one type of user may be developer, who might demand a sophisticated, flexible tool with cross-platform support. Another type of user may be computer novice, who needs a friendly tool that guides them through the basics.

4.3.2 Define End User Needs

Define what each group of end users needs or wants from the new system. The unique business needs of each end user should be described here. Detail the working environment of the target user. List the key problems with existing solutions, as perceived by the user. A thorough profile should cover the following topics for each type of user.

- Technical background and degree of sophistication
- Key responsibilities
- Deliverables the user produces, and for whom
- Trends that make the user's job easier or harder
- Define what the end user defines as "success"
- Define how the user is rewarded
- Define the number of people involved in completing the task and how often the number changes
- Define a task cycle by amount of time spent in each activity and how often the number changes
- Describe what hardware platform(s) are in use today and any future platforms
- Define all interface applications systems
- Describe problems that get in the way of success
  - describe the reasons for this problem
  - describe how is it solved now
  - describe the solution(s) the end user would like to see

4.3.3 Identify All Constraints

Identify and describe all constraints imposed on the new system. Constraints are situations that cannot be controlled or changed. They could be regulatory, policy, hardware, software, telecommunications, assumptions, unique environmental constraints: mobile, outdoors, in-flight etc. Assumptions may not be design constraints on the product. However, if assumptions change, the Business Needs Document will require modification. For example, an assumption may be that state regulations prohibit a trucking company (the user organization) from shipping mixed batches of chemicals X and Y to that state. A business need is identified to automatically reject travel orders, which direct a truck carrying chemicals X and Y to enter that state. If the state later changed the regulations to allow the shipments, the business need would no longer be required or even desirable.

Identify any relevant laws, regulations, or organization policies, or other constraints, which may affect the user's business process. The source and quotations for the regulations should be included, as well as any interpretations or exceptions used by the user's organization. The effect of these constraints may directly determine a business need, and they may or may not be negotiable.

4.3.4 Identify The Types Of Data

Efforts should be made to identify the types of data that describe the business environment. This data will probably be needed to support future management decisions that are not currently predictable.

4.3.5 Refine The Business Needs

All business needs are not created equal. The end user ranks business needs by importance, which creates an open dialogue with customers, analysts, and members of the development team. Review and refine the business needs to the lowest level for the new system to determine if the purpose, goals, objectives and policies will be accomplished. Future business trends and technological changes should be considered. End user requirements can be fulfilled; however, the system can fail if objectives are not met. The following table provides tips to determine the ranking of business needs. It is important to know the relative importance the user places on solving each business need. Ranking and cumulative voting techniques should show which problems *must* be solved versus those issues that would be nice to have addressed.

Business Needs Ranking Table

Critical	Essential features. Failure to implement means the system will not meet customer needs.
Important	Features which are important to the effectiveness and efficiency of the system for most applications. The functionality cannot be easily provided in some other way.
Relevant	Features which add real value for most applications. It is acceptable that these functions can be achieved by a reasonably efficient “work around”.
Useful	Features which will be useful in less typical applications, or which would be used less frequently.

After ranking the business needs, determine the priority. Priority communicates which features will be done first, which features will be implemented if time permits, and which are postponed. Most project managers find that prioritizing the relative importance of business needs into categories of high, medium and low are sufficient, although finer classifications may be required.

Business Needs Priority Table

High	These business needs are required to meet the objectives of the system and are planned for inclusion in the next release.
Medium	Business needs that will be implemented if time permits and are not required for the next release.
Low	Business needs of lower priority, significant effort, risk, or complexity, are unlikely to be included in the next release of the system.

4.3.6 Document Each Business Need

Use the documented Business Needs from the previous step to ensure each need is detailed to a level sufficient to completely describe each business function. Document each business need in tabular format to provide for ease of tracking through each phase of the project. The business needs should be defined textually in a database or in a Word document table using terminology common to the user. If business needs are documented in Word, use the following convention:

A. Business Need #1
  1. First level Detail #1
    a) First level Detail #1
    b) First level Detail #1
  2. First level Detail #1
    a) First level Detail #1
    b) First level Detail #1
B. Business Need #2
C. etc.

The following table is an example of the minimum elements required for documentation of a business need. At a minimum capture:

Short Title	Provide a short title as a reference point.
Business Need Identification Key	Sequential number.
Business Need Source Point Of Contact	Identify the source or point of contact of each business need. Capture the name, organization, telephone number, email address, date of first contact and alternate point of contact. The source records an explanation or a reference to an explanation. For example, the reference might be to a page and line number of a proposal, regulation number, policy number. References may also be to an individual during an interview, user test or telephone conversation.
Definition Of Need	Define the need as described by this group of users. It is often convenient to break the business needs into the following sections: • State any external interface requirements. Remember that these are interface requirements for the business model. • Describe all input sources and method of input; i.e. keyboard entry, file transfer, e-mail, etc. for the business model. • Identify all outputs and describe the method of output, i.e. CRT display, printed reports, manifests, verbal notification, etc. for the business model. • Include different levels of user access to data and physical security constraints needed in the business model. Address the procedures that are or need to be used to maintain security in the business model. • Use this section to detail testable performance requirements. Performance issues can include such items as accuracy, reliability, or response times under a variety of loading conditions, etc.
Analyst Comment	Provide any additional information that may impact the desired result. The analyst comment may be used to track dependencies between business needs. Some business needs are dependent on the implementation of other business needs.
Pertinent Information	Any other pertinent information the analyst deems necessary, i.e. regulatory requirements, constraints, goals and objectives, types of data, end users or functional areas.
Ranking	Ranking as explained in the previous sub-section 'Refine the business needs'.
Priority	Priority as explained in the previous sub-section 'Refine the business needs'.

4.4 BUSINESS MODEL

Information gathered in previous steps of this procedure will be useful in completing the business model. Prepare data flow diagrams that identify the information sources, process requirements, storage media, products, product users and external interfaces. Data dictionary or entity relationship diagrams may be used as well if the complexity of the data requires it. Many customers will not be comfortable with data flow diagrams, data dictionaries, and entity relationship diagrams. Additional explanatory text may be needed. The diagrams should fully define the organization's business model and clearly depict the flow of information from business source to end user.

4.5 SIGNATURES

Review the Business Needs Document (BND) with the customer. The customer(s) and the project leader should sign and date the BND. Upon proper approval, the BND will be baselined.

4.6 REVISION HISTORY

The *Revision History* section of the Business Needs Document (BND) allows for document control. It is recommended to keep track of all revisions to the BND.

5. Exit Checklist

The baselined Business Needs Document is stored in the project history library and the Project Information Repository.

6. Supporting Materials / Reference Documents

Document Name	Storage Location
Project planning materials	PIR
Requirements Gathering Plan materials	PIR

7. Document Control

7.1 Approval

The following groups and individuals have approved this document:

- AMI Software Engineering Process Group

Signatures are on file in the SEPG Library.

7.2 Document History

Revision	Date	Description
1.0	09/11/98	Baselined and approved.

7.3 Document Storage

This document was created using Microsoft Word for Windows 7.0. The file is stored in AMI's Process Asset Library.

7.4 Procedure Owner

The AMI Software Engineering Process Group is responsible for maintaining this procedure.